REMARKS

The Examiner is thanked for the due consideration given the application. This amendment is being filed concurrently with a Request for Continued Examination.

Claims 1-3 and 7-23 are pending in the application. Claims 14-23 are newly presented. The amended claim set finds support at pages 3 and 4 of the specification and in the drawing figures.

No new matter is believed to have been added to the application by this amendment.

Rejection Under 35 USC §103(a)

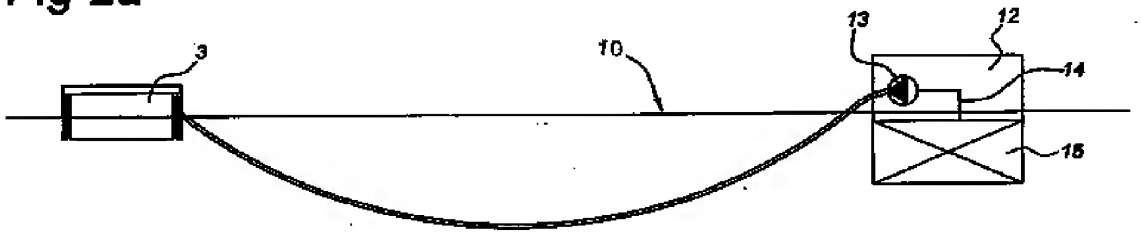
Claims 1-3 and 7-13 have been rejected under 35 USC §103(a) as being unpatentable over MAYAU et al. (WO 02/44607 A1) in view of LIVELY (U.S. Patent 6,397,895) and OMA et al. (U.S. Patent 6,976,443).

The present invention pertains to a method of supplying oil from a first floating structure to an offloading structure, i.e., a buoy without hose storing capacity. The present invention entails the utilization of a single flexible duct of elastomeric material that has an internal diameter of at least 600 mm and a length of between 1,500 m and 3,000 m (claim 1). This results in the required degree of flexibility of the mid-water transfer hose of the invention connecting the floating structures and prevents wax formation, solidification, or wax forming of

the oil, which is detrimental to the operation of the transfer duct and can lead to complete blocking, requiring replacement of the duct.

Flexibility of the hose of the present invention is important in order to bridge the varying positions of the two floating structures due to environmental influences, such as waves, winds and currents. As is shown in figures 2a-2c (Figure 2a is reproduced below), varying curved configurations which provide a length compensation, are provided by the duct of the invention in order to allow the floating structures 3 and 12 to approach or drift away from one another, without creating tensions in the duct.

Fig 2a



Claim 1 of the present invention sets forth that the duct lies in the upper halve of the water depth with the end parts above water level. T his results in reduced cooling and reduced hydrate formation as the water higher up is warmer. Furthermore, the lower water depth results in the possibility to use an elastomeric hose for good temperature insulation which hose at greater depths would collapse due to increasing water pressure.

Claim 14 of the present invention has also been instantly presented to better describe the offloading structure 3, stating: *"the offloading structure comprises a buoy without hose storing capacity."* New claims 15-23 also present embodiments of the present invention pertaining to the buoy.

The end positions of the duct of the present invention can be properly inspected above the water surface. The symmetry of the duct in the length direction results in a gradual distribution of forces along his length and equalization of bending and buckling forces along its length, avoiding local stress-build up.

Furthermore, the object of the invention of providing a high throughput at reduced pumping rates is met by providing a single large-diameter duct with a friction reduction layer (claim 13, such as a nitrile layer (claim 10), on the inner surface of the elastomeric material. The friction reduction layer helps maintain low pumping pressures when the oil cools down slightly and viscosity is increased during transport.

MAYAU et al. pertain to a connect hose with a connect flange, where a flexible duct 1 extends between two structures. Figure 1 of MAYAU et al. is reproduced below.

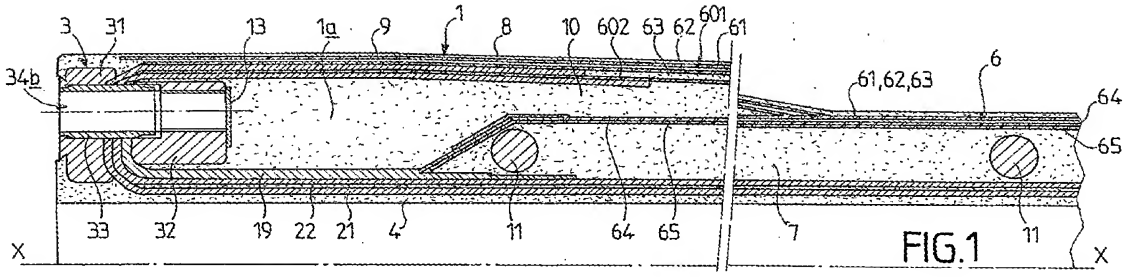


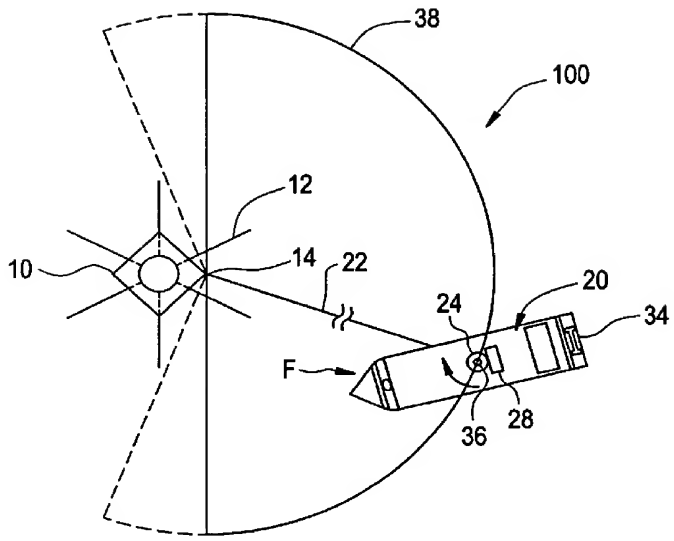
FIG.1

MAYAU et al. relates to a connecting flange of a flexible hose, which hose could be used between two floaters at a depth of 1000 meters and bridging a distance of 1.6 km (MAYAU et al., page 13, lines 9-28).

The Official Action refers to LIVELY, which pertains to an insulated steel pipe that can have an optional abrasion resistant layer. However, this steel pipe of LIVELY cannot be analogized to the flexible duct formed from elastomeric material of the present invention.

Newly applied OMA et al. pertain to a crude oil transportation system. Figure 1 of OMA et al. is reproduced below.

FIG. 1



In OMA et al., the flexible hose 22 is connected between a dynamically positioned DPFSO (Dynamically Positioned Floating Storage and Offloading Vessel) 20 and an offshore production platform 10. The flexible hose 22 is of a completely different nature than the one described in the present invention, as it can be rolled up on a storage reel or drum 28 on the DPFSO 20 upon (emergency) release from the platform, as described in OMA et al., column 3, lines 50-58.

Firstly, the hose 22 is of a relatively limited diameter of 6-8 inches (OMA et al., column 3, line 21), in contrast to the hose of the present invention, which bas an internal diameter which is more than 3 times larger: at least 60 cm. The hose according to the present invention could in view of its dimensions not been wound on a reel of a size which would

fit on an FPSO without serious detriment to the vessel's available deck space.

Secondly, as the hose in OMA et al. is to be wound on a reel, it can only be relatively short, on the order of 500 m (OMA et al., column 2, lines 40-46). Too long hoses would require reels which would become to large in size. The depth at which the hose 22 in OMA et al. is situated is, in view of this short length, limited and not lower (as seen from the schematic drawing) than 50 m. In contrast, the hose of the present invention is of a length of over 1500 m, and extends at a depth of deeper than 50 m. At these larger depths, for these large length ducts, heat loss and increase in the oil viscosity is a Serious problem which has been solved by the present invention.

This does not at all come into play in the relatively short and shallow flexible hoses disclosed in OMA et al.

In brief, the skilled person has no incentive from OMA et al. to reduce heat loss in flexible mid-water hoses, and to combine OMA et al. with LIVELY (steel hose) or MAYAU et al. (long mid water hose connecting element). On the contrary, the hoses of MAYAU et al. and LIVELY (rigid) are impossible to wind on the reel 28 of moderate diameter and could not be combined with OMA et al. without serious modifications to the disclosed crude oil transportation system.

Claim 14 of the present invention has also recites: "*the offloading structure comprises a buoy without hose storing*

capacity." See also claim 20. This clearly distinguishes over the dynamically positioned DPFSO in OMA et al. No storage of the long hose with large diameter on the buoy is intended nor provided for in the present invention.

One of ordinary skill and creativity would thus fail to produce a claimed embodiment of the present invention from a knowledge of MAYAU et al., LIVELY and OMA et al. A *prima facie* case of unpatentability has thus not been made.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The rejection is believed to be overcome, obviated or rendered moot, and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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